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ABSTRACT

A study examined the organizational climate of a university undergoing dramatic change and its relationship to specific aspects of that institution's organizational culture. Earlier research has shown that organizational climate directly affects an organization's communication climate, but it is less clear how organizational climate influences and is influenced by the more pervasive concept of organizational culture. The possibility of a reciprocity between culture and climate was a key focus of this study. A total of 128 of 145 academic staff across six faculties and one center of the new North Coast University (Australia) completed anonymous surveys. Semi-structured interviews were conducted with the Deputy Vice-Chancellor, the Deputy Principal, all seven Deans, and all 15 Center Heads from the various faculties. Results confirm recent findings that culture informs climate in a number of important ways, most notably through the influence of organizational leadership. Data also yielded some new insights as to the ways in which organizational climate and culture intersect, which had particular relevance at the sub-unit level where climate features were perceived to be most positive in those faculties whose subcultures were found to be congruent with the leadership culture. (Contains 63 references, four tables of data, and two figures illustrating aspects of organizational communication models are included. The survey instrument and a factor analysis are attached.) (Author/RS)

The Relationship Between Organisational Culture and Organisational Climate with Reference to a University Setting

by

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ABSTRACT

Organisational climate and culture have been important constructs in organisational theory for about thirty years (Moran and Volkwein, 1988; Schein, 1992) although relatively few researchers have chosen to study them concurrently, either conceptually (Moran and Volkwein, 1992) or empirically (Turnipseed, 1990). Yet climate and culture research in the last ten years has enriched our understanding of organisational theory. This study examined the organisational climate of a university undergoing dramatic change and its relationship to specific aspects of that institution's organisational culture. While it had been shown that organisational climate directly affects an organisation's communication climate (Goldhaber, 1990), it is less clear how organisational climate influences and is influenced by the more pervasive concept of organisational culture.

There is a good deal of conceptual blurring in the literature when it comes to key terms such as organisational climate and organisational culture (Falcione and Kaplan,1984: 285; Jablin,1980: Schein, 1990). For example, belief systems which are regarded as central to organisational climate are ultimately derived from prevailing value systems and therefore, must somehow be associated with organisational culture. Hence, the possibility of a reciprocity between culture and climate was a key focus of this study.

In the present study research methodology employing both quantitative and qualitative techniques addressed a number of important questions related to the interaction of these two variables in a newly emerging university. Results confirm recent findings that culture informs climate in a number of important ways, most notably through the influence of organisational leadership. The study explored the ways in which organisational culture evolves to become intertwined with and perhaps even the foundation of organisational climate. The data yielded some new insights as to the ways in which organisational climate and culture intersect. This had particular relevance at the sub-unit level where climate features were perceived to be most positive in those faculties whose subcultures were found to be congruent with the leadership culture.

ORGANISATIONAL CLIMATE

The concept of organisational climate in one form or another has been the subject of extensive research for more than thirty years. Extensive reviews (Guion, 1973; Hellriegel and Slocum, 1974; Jablin, 1980; James and Jones, 1974; Koys and DeCotiis, 1991; Payne and Pugh, 1976; Schneider and Snyder, 1975) are drawn upon in the course of this study, although a comprehensive review of all pertinent research during this period is well beyond the scope of this research. Organisational climate is a complex multi-dimensional phenomenon that sets out to describe "those perceptions that are psychologically meaningful, and that people agree upon, which characterise systems, practices and procedures" (Schneider and Snyder, 1975) of an organisation.

James and Jones (1974) were at pains to make the distinction between organisational climate as a property of organisations versus psychological climate as the property of individuals. Others soon followed, such as Schneider and Reichers (1983) who asserted organisational climate is a by-product of naturally occurring interactions of people and as such is not reducible to an individual level analysis. This spurned the beginning of a decade long debate between these two constructs (Drexler, 1977; Glick, 1985; Joyce and Slocum, 1982; 1984; Turnipseed and Turnipseed, 1992).

Moran and Volkwein (1992) list a number of studies (including Guion, 1973; Payne and Pugh, 1976) that regard climate as an *objective* manifestation of the structures of the organisation (e.g. size, number of levels in the hierarchy) and is reflected in the commonality of perceptions of organisational events. Drexler (1977) claimed minimal variance amongst member perceptions would count as evidence for the homogeneity of organisational climate at an organisation-wide level..

Ultimately, questions regarding the appropriate unit of theory depend on the ways in which the data are to be used and the phrasing of the particular survey items (Schneider and Reichers, 1983). Because the present study concerns subclimates that may be found within a university setting, the questionnaire items have been written in such a way as to focus attention on each person's supervisor within their immediate reference group, thus diverting attention away from organisation-wide perceptions.

Despite the unit of theory problem, almost all measures of organisational climate have been empirically derived from aggregated member perceptions. One is inclined to agree with Ashforth (1985) when he asserts the futility of arguing whether climate is an individual or organisational variable. The claim is that both a micro and a macro concept have the potential to explain how the individual and the organisation can be seen as part of an interdependent system.

In an attempt to condense the many disparate views on the concept of climate, Koys and DeCotiis (1991) employed a number of techniques to reduce the concept to a manageable number of dimensions. They conducted a cull of over 80 leading studies that left 45 which addressed the following criteria: They had to involve perceptual measures that set out to describe (not evaluate) organisational events and did not address organisational or task structures.

Following the literature reduction, the 45 studies were categorised into eight concepts thought to be reflective of the climate universe. Table 1 contains the eight summary dimensions Koys and DeCotiis derived from their extensive review of the literature.

Table 1. Definition of Each of the Eight Dimensions of the Universe of Psychological Climate Perceptions

Dimension	Definition
Autonomy	The perception of self-determination with respect to work procedures, goals, and priorities.
Cohesion	The perception of togetherness or sharing within the organisation setting, including the willingness of members to provide material aid.
Trust	The perception of freedom to communicate openly with members at higher organisational levels about sensitive or personal issues with the expectation that the integrity of such communications will not be violated.

Pressure	The perception of time demands with respect to task completion and performance standards.
Support	The perception of the tolerance of member behaviour by superiors, including the willingness to let members learn from their mistakes without fear of reprisal.
Recognition	The perception that member contributions in the organisation are acknowledged.
Fairness	The perception that organisational practices are equitable and non-arbitrary or capricious.
Innovation no	The perception that change and creativity are encouraged, including risk-taking into new areas or areas where the member has little or prior experience.

For each category items were generated and the 40 psychometrically best ones were subsequently used in a validation study with two separate samples of managerial and professional employees. A principal components analysis on both samples confirmed the presence of the eight factors listed above, accounting for 60% and 71% of the variance in each case. These dimensions of climate form the basis of the present investigation into the ways in which organisational climate and organisational culture may be related.

In summary, the view taken here is that organisational climate is seen as a descriptive construct, reflecting consensual agreement amongst members regarding key elements of the organisation in terms of its systems, practices and leadership style. The definition of organisational climate which best fits the present study is offered by Moran and Volkwein (1992) and is an amalgam of elements from definitions derived from the cited work of Forehand and Gilmer (1964), Pritchard and Karasick (1976) and DeCotiis and Kays (1980).

> Organisational climate is a relatively enduring characteristic of an organization which distinguishes it from other organizations: and (a) embodies members' collective perceptions about their organization with respect to such dimensions as autonomy, trust, cohesiveness, support, recognition, innovation and fairness; (b) is produced by member interaction; (c) serves as a basis for interpreting the situation; (d) reflects the prevalent norms, values and attitudes of the organization's culture; and (e) acts as a source of influence for shaping behavior (Moran and Volkwein,1992: 20).

ORGANISATIONAL CULTURE

While the concept of organisational culture is not new and can be linked to its anthropological origins (Smircich and Calas, 1987), as an organisational variable it appears to have enjoyed a somewhat shorter history (Schein, 1990) than climate. Owens (1987: 164) traces its development starting with the Western Electric research of the 1930s, on up to the early 1980s where three key publications emerged - Ouchi's (1981) *Theory* Z, Peters and Waterman's (1981) much acclaimed *In Search of Excellence* and Deal and Kennedy's (1982)*Corporate Culture: The Rites and Rituals of Corporate Life*. These had an enormous impact on the study of organisational behaviour and not surprisingly a plethora of definitions emerged. Most refer to the notion of corporate culture as an internal variable of the organisation (Smirich and Calas (1987). To illustrate, Peters and Waterman (1982: 75) saw culture as being reflected in the organisation's shared values and depicted though stories, myths and legends. Some regard culture as a complex, multilevel concept (Schein, 1985) while others opt for a much simpler definition, seeing it as "the way we do things around here" (attributed to the CEO of McKinsey and Company by Deal & Kennedy, 1982: 4).

Finally, Kabanoff (1993:10) describes organisational culture

> as a set of cognitions that are shared by all or many members of a social unit and which are acquired through social learning and socialisation processes , and they include values, common understandings and patterns of beliefs and expectations.

A number of recurring elements are apparent in the various definitions including:

- widely shared values (e.g. the customer comes first);

- values which are often implicit and are almost taken for granted; and
- the communication of values through symbolic means (memos, myths, rituals)

It seems all need to be present. For example as More and Ross-Smith (1990) note, although memos, reports embrace the notion of organisational culture, such communication is not a sufficient condition to explain organisational culture.

Schein (1985, 1992) claims certain basic assumptions, values and artefacts are important for any analysis of organisational culture. He summarises them as follows:

- *Basic assumptions* are those deeply embedded - usually unconscious - understandings that people have about how their organisation operates - its fundamental rules.
- *Values* are those expressed beliefs about the nature of such rules.
- *Artefacts* are those manifestations by which we are most likely to be able to see the essence of culture. Artefacts take many forms, including language, stories and myths, rituals and ceremonies, norms, the physical environment and management practices.

At the surface level are the artefacts which reflect the organisation's values, which if sustained over a period of time contribute to shared assumptions that become so taken for granted that they drop out of awareness. Nevertheless, they continually guide behaviour and influence organisational members in terms of how to perceive think and feel about things (Argyris and Schon, 1978). In summary, Schein (1992: 10) defines culture as "the accumulated shared learning of a given group covering behavioural , emotional and cognitive elements of the group members total psychological functioning". As such, culture is taken to represent the group members' accumulated learning. In this research the culture of the University will be studied primarily at the level of artefact, followed by an attempt to identify underlying values, beliefs and attitudes, and at its deepest level basic assumptions.

Upon closer examination, Schein's (1992) *assumptions* are seen to refer to cognitions, perhaps even tacitly held, about the manner in which the organisation operates. In many respects this is similar to Sackmann's (1991) hidden components of organisational culture which she likens to an iceberg in the sense that it is, for the most part, out of sight. The invisible components of culture which lie below the surface (and which parallel Schein's basic assumptions) concern long term beliefs which have tended to sink out of sight and become taken-for-granted assumptions regarding the way things are done. Located on the surface are various behavioural manifestations of culture which are visible and may be reflected in management practices, videotapes and company logos. Hence, like Schein (1992), Sackmann (1991) draws a distinction between the behavioural manifestations of culture and the cognitive components (values, attitudes and beliefs) which give rise to those behaviours. Taken collectively, it is these visible elements of culture which are thought to be reciprocally related to dimensions of organisational climate.

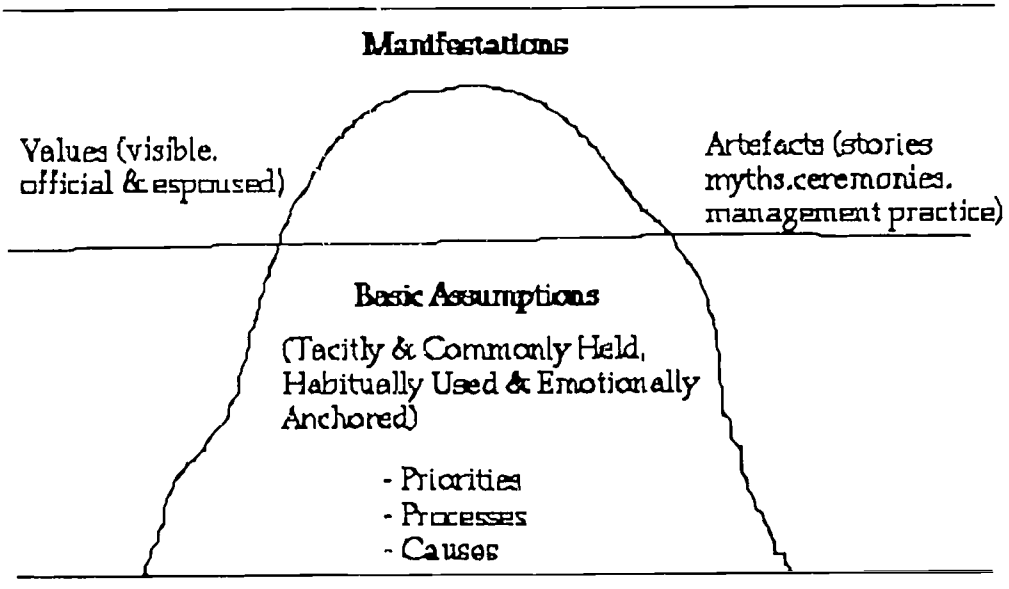

Figure 1. Sackman's Iceberg Model of Organisational Culture

Just as there is compelling evidence for the presence of subclimates within organisations, it is generally conceded there may be a number of subcultures, structured along national, ethnic, religious or professional lines. Beyond these, however, there is usually a pervasive set of values and beliefs that can be identified and which can be traced directly to the broader cultural context of which the organisation is a part (Schein, 1990).

Overall, the concept of organisational culture appears in many ways to be more diffuse than that of climate. As Smircich and Calas (1987: 245) note "the organizational culture literature is full of competing and often incompatible views. Functional, interpretive and critical voices are all speaking at the same time" reflecting differing world views and epistemologies. This project acknowledges the influence of the anthropologist Clifford Geertz (1973: 5) who likens culture to a web, suggesting " Man is an animal suspended in webs of significance he himself has spun". The analysis of culture therefore, can be an interpretive search for meaning within a pattern of symbolic discourse. The researcher, as insider, is ideally placed to uncover recurring themes that are linked together by shared values, beliefs and attitudes (e.g. Ashforth, 1985).

Culture Studies in Higher Education Institutions

Tierney (1988: 6) feels that there has not been enough research carried out on culture in higher education. In fact, he points out that "a useable definition of organisational culture appropriate to higher education has remained elusive." Most of the culture analyses that have been undertaken in higher education have been conducted within the functionalist paradigm that essentially views the system as one of being stable and consisting of integrated and interdependent parts. As suggested earlier this study adopts an interpretivist stance in its quest to uncover the organisational culture of the new North Coast University.

Harman (1989) investigated the culture of the University of Melbourne and concluded there can be no one academic culture. In fact, a number of levels exist including various academic disciplines the university serves, the academic profession and the higher education system itself, of which the academic profession is a part. Harman did find a number of themes that were commonly expressed although they emerged from divergent interests and divided loyalties on the campus (e.g. all members in their professions should be experts in their field). In spite of the presence of a few unifying themes (e.g. broad values wound up in a university's mission statement) there remained many differences, leading Harman to conclude that at the University of Melbourne there is not one "unifying culture but clusters of subcultures some of which harmonise with one another and some of which clearly do not (Harman 1989: 50) ."

While it may be true academic staff comprise a loose amalgamation of subcultures within any university it is suggested that, for the most part, a university's organisational culture is derived directly from a number of enduring values, attitudes and beliefs, most notably those held by upper management levels. Where there is a clash of values it is easier to understand if one remembers that a university does not normally conform to Weber's mechanised concept of a bureaucracy. Indeed, Mintzberg (1983:83) characterises a university as an example of a professional bureaucracy wherein academic staff work relatively independently and have considerable control over their own work.

TOWARDS AN INTERACTIVE MODEL OF CULTURE AND CLIMATE

As much of the previous discussion has indicated, there are many similarities between these two key organisational concepts. A number of researchers have considered and rejected the proposition that they are synonymous (Moran and Volkwein, 1992; Schneider and Synder, 1975). Yet, because the two variables share a number of overlapping attributes the distance between culture and climate is perhaps not so great as first thought. According to Ashforth (1985: 841), "It is not a large conceptual step from shared assumptions (culture) to shared perceptions (climate)".

Other researchers focus on what they see as the most important differences (Glick, 1985; Rentsch, 1990). In distinguishing between organisational culture and organisational climate, Falcione and Kaplan (1984: 301) suggest that organisational culture is likely to "persist over time, while climate is the assessment of these elements at any given moment". Thus, culture for these authors is a predictor variable influencing or constraining the behaviour of the organisational members.

Glick (1985) claims the differences persist because of different methodological approaches. Climate, with its origins in the Lewinian social psychology, and hence a positivist paradigm, employs questionnaires to directly assess member perceptions of organisational events but does not attempt to interpret the meaning of the those events (Rentsch, 1990). Culture, on the other hand, with its stronger sociological bent has relied upon qualitative methodologies, most often from a

symbolic interactionist perspective, to uncover the shared assumptions surrounding organisational events. So while it is conceded the concepts of culture and climate are not co-extensive, a major focus of the present study is to examine the nature and extent of reciprocity between these two important organisational variables.

The origins of an interactive and perhaps even an integrated model of culture and climate rests with Turnipseed (1988) who identified a number of factors that determine the effectiveness of various school districts (e.g. scores on essential skills tests such as reading, spelling and mathematics tests). A work environment scale (WES) was administered as a way of assessing organisational climate in the most effective school district as compared to least effective school district. Dimensions measured by the WES included *supervisor support, autonomy, peer cohesion, work pressure and innovation*. Of the 10 measured dimensions, 9 were higher in the more effective system.

Turnipseed (1988) noted these features interacted with various cultural factors of the school districts such as management policies and behavioural norms. For example, impoverished organisational culture, as reflected in the presence of more and detailed constraining rules and regulations, together with an orientation towards compliance, and a lack of operational goals was found to be more characteristic of the least effective district. Further, there were more levels of managerial hierarchy in the least effective district, a factor that in itself would make the management of organisational climate more difficult since it distances managers from those in the lowest levels in the organisation. Finally, the most effective system placed a greater value on innovation which this writer suggests is a dimension of organisational climate. Similarly, in the most effective system the climate was more supportive and less controlling again reflecting values usually associated with the cultural facet of management practice (Sackmann, 1991).

Basically, Turnipseed (1988) is saying that organisational climate is a quantifiable concept whereas organisational culture is more qualitative by nature and therefore less tangible. Nevertheless, the two concepts appear to be reciprocally related and hence he advocates an interactive and integrated model of organisational climate and culture. In essence, there needs to be a recognition that climate, as well as being influenced by culture, is simultaneously capable of shaping culture.

Maxwell and Thomas (1991: 80) also propose a 'peaceful coexistence' between climate and culture. They examined the relationship between the two variables as they apply to school settings. At the outset there is a belief that climate, as a metaphor, is a more appropriate term since it allows people to sense, rather than understand, the climate of a school. Whilst conceding that climate is an inferred variable, it does have observable tangible expressions such as the wearing of school uniforms which this author takes to be coextensive with aspects of culture.

O'Reilly, Chapman and Caldwell (1991) found empirical evidence for factors within an organisation's culture profile that were similar in many respects to Koys and DeCotiis's (1991) dimensions of climate. For example, they uncovered factors relating to innovation, supportiveness, recognition and team orientation (cohesion).

More evidence for the congruence of culture and climate comes from the work of Hofstede, Neuigen, Ohayr & Sanders, (1990) who describe the manifestations of culture through their onion skin model where culture is uncovered by peeling back successive layers of skin. Hofstede et al (1990) evinced evidence to empirically demonstrate daily practices reflect the core of an organisation's culture and this is taken as further evidence for congruence between culture and climate. What Hofstede regards as practices, Sackmann (1991) would see contained within the tip of the iceberg. Rousseau (1990: 154) conceives of culture in a way similar to Hofstede's onion skin model claiming that various layers can be examined. On the outside are the artefacts which are the most accessible and visible and, therefore objective, expressions of culture (i.e organisational practices), while in the centre are fundamental assumptions which constitute the most subjective and least accessible core of the organisational culture. In between are people's attitudes, values and beliefs that are of intermediate objectivity and accessibility.

Organisational members develop shared perceptions of their workplace (i.e. climate) in large part against a common frame of reference (i.e. culture) that is continually created and re-created (Berger and Luckman, 1967). In other words, the perceptions that give rise to organisational climate are borne of interactions which

> are highly constrained and regulated by the prior and deeper meanings of the organization's culture as manifested by such elements as values, norms and myths. For example, salient dimensions of climate such as trust, support and fairness ... are not defined independently of their context - in this case organisational culture (Moran and Volkwein, 1992: 31).

In summary, the author shares the view expressed by Ashforth (1985) that concepts of culture and climate reside on the same continuum with "climate being more grounded in individual consciousness whereas culture is largely preconscious or more to do with tacitly held beliefs" (p.841). Cultural assumptions and shared values assist in defining experiences that are psychologically important (e.g. recognition, autonomy, support). More importantly for Ashforth, culture provides the means for organisational members to make sense of their experiences. This is an important point since it sets the stage for the present study. To date no one has systematically related climate perceptions to cultural assumptions and values and this is the central undertaking of this research.

THE RESEARCH PROJECT

This project examines the extent to which the culture of an organisation can be inferred from behavioural features of an organisation as manifested in the organisational climate. Hence, an examination of the specific relationship between culture and climate begins with actual perceptions of organisational events as encapsulated in Koys and DeCotiis's (1991) dimensions of climate but not individuals' interpretations of those events. For this to happen, the research design calls for a qualitative approach, whereby the meaning of various levels of discourse can be analysed using, for example, an extensive interviewing situation with senior academic staff. Such in-depth probing leads to the surfacing of underlying assumptions, cognitions and feelings as represented in Sackmann's (1991) iceberg model of culture. At this point it is possible to do two things. First, there is the opportunity to explore the overlap thought to exist between the conceptual variables of culture and climate. Second, and of greater interest, is the potential for exploring the reciprocity of these same two variables.

Because organisational culture and organisational climate studies have typically resorted to distinctively different methodologies in order to tease out their core characteristics (Renstch, 1990), the methodology for this study combined quantitative and qualitative techniques. While climate can be surveyed with recognised questionnaires, in order to get at culture and the underlying process of how meaning is made (Sackmann, 1991), an inductive approach, taken from the researcher's perspective as an 'insider', was used. Part of the rationale for a qualitative approach to uncovering culture is supplied by Schein (1985) who believes it is not possible to glean organisational member interpretations of significant events without consulting them. The key research questions for this project were as follows.

Research questions

1. What is the nature of the relationship between organisational culture and organisational climate with particular reference to a university experiencing dramatic change?

2. To what tent, if any, can organisational climate replace organisational culture as the 'glue' of an institution in times of rapid change?

With these research questions in mind the specific objectives were to:

- assess the dimensions of the University's organisational climate;
- uncover from an insider's perspective, the tacitly held beliefs, values and attitudes related to the culture of the University; and
- draw comparisons and contrasts between the organisational climate and the organisational culture of the University.

Methodology

Subjects

To ensure the data were maximally representative of the academic arm of the organisation, the total population was targeted. Accordingly, the survey involved 145 academic staff across six faculties and one centre of the new North Coast University. The completed climate survey, pre-coded to allow Faculty identification, was returned anonymously by 128 respondents to the Graduate Research College after which they were picked up by the researcher. The overall response rate was an excellent 88%.

Subsequently, in order to uncover the organisational culture, semi- structured interviews were conducted with the Deputy Vice-Chancellor, the Deputy Principal, all 7 Deans, and all 15 Centre Heads from the various faculties. As managers they were seen as proxy for the organisation in elucidating the assumptions underlying the organisation's culture. The rationale for excluding organisational staff lower down in the organisation is provided by Sackmann (1992)[1].

Climate Survey

The questionnaire (see Appendix A) used in the present study was based on a forty item instrument designed by Koys and DeCotiis (1991). Minor modifications were made to the questionnaire in order for it to be more appropriate for use in an Australian university context. For example, *My boss is not likely to give me a 'greasy meal'* was re-worded to read *My superior is not likely to give me a hard time.* The revised questionnaire asked subjects to describe, not evaluate, the climate within the university. The intention here was to encourage the respondent to draw on actual experiences as a basis for describing climate. Moreover, in an effort to capture the perceptions of each member as opposed to some generic, or some organisation-wide perception, items such as *I feel like I never have a day off* were preferred to *People in this organisation feel like they never have a day off.*

Culture Analysis

The initial response to the climate survey formed the basis of an issues- focused investigation, from a phenomenological orientation, in an attempt to uncover the higher order concept of organisational culture. Deeper levels of meaning were sought as the outcome of unstructured discussions with the senior academic members of the University. Acknowledging that it is not possible to uncover an entire culture (Schein, 1992) the project adopted a relatively narrow focus revolving around just a few issues that were explored in depth with each respondent (e.g. leadership, decision making, recognition, trust and promotion). Subsequently, it was possible to look at the underlying values, attitudes and beliefs that fuel those issues. Interviews were structured around open-ended questions related to key issues including:

- Is there anything different or unique about the way things are done around here?
- How are decisions made in this organisation?
- How do you get ahead in this organisation?
- How would you describe this as a place to work?
- How is trust perceived around here?
- Which work problems keep you awake at night?
- What are some stories and legends about this place?
- If the local newspaper was to write an accurate story about the University what would it say?

Interviews where possible, were recorded on audio tape, otherwise handwritten notes were taken. It is acknowledged that what came out of the relatively unstructured interviews was contextually specific and, therefore, not easily generalisable. Moreover, if the culture of the University was to be accurately uncovered the researcher needed to set aside preconceived notions of what it might have been like. In addition, it was important that the interviewer remained genuinely curious about organisational events (Spradley, 1980). The difficulty was to provide a sufficiently loose or open ended set of questions that permitted the respondents to draw on their cultural perspective rather than the researcher's framework (Sackmann, 1991).

Following this, transcribed interviews were examined for the presence of overlapping elements and themes. Finally, a first cut was made at identifying underlying assumptions shared by organisational members.

Results and Discussion

Levels of Agreement in Climate Questionnaire

In registering extent of agreement (or otherwise), use was made of a five-point Likert rating scale ranging from 'Strongly Agree' to 'Strongly Disagree'. Results were analysed following the assignment of scores to each of the scale points such that 1 = 'Strongly Disagree' and 5 = 'Strongly Agree'. This allowed the items to be ranked from high to low agreement on the basis of a mean score for each item across respondents. Additionally, the five-point scale was reduced to a three-point scale for ease of interpretation by collapsing the 'Agree/Strongly Agree', scale-points into a single 'Agree' scale-point and similarly collapsing the 'Disagree/Strongly Disagree' scale-points into a single 'Disagree' scale-point. Table 2 presents the data obtained from these two procedures.

Two features distinguish the pattern of these responses. First, the highest levels of agreement related to items concerned with autonomy and interpersonal communication. Staff felt free to organise and timetable their work in terms of determining their own schedule and deciding when

and how their work is to be done. After autonomy, the next highest area of agreement related to the communicative aspects of staff members' interpersonal relationship with their immediate superior. Overall, superiors were seen to be fair, trustworthy and supportive. For example, around two thirds of all respondents agreed their superior was approachable in the sense of being easy to talk to about work related problems. A similar proportion of respondents regarded their superior as possessing a good deal of personal integrity and a person who was not likely to give them a hard time.

The second feature relates to the relatively low rating accorded items concerned with recognition for getting the job done and a general absence of cohesion within the institution.

To address the question of whether the separate items in the questionnaire were a function of generalised factors, a series of analyses were undertaken to assess the psychometric properties of the climate survey. A principal components analysis with a Varimax rotation, using the SYSTAT module FACTOR, identified five factors with eigen values greater than 1, from the forty climate questions. Together these accounted for approximately 63% of the overall variance. Items from the survey that loaded 0.45 or higher on these factors are shown in Appendix B. While the reduced variable set did not exactly reproduce the 8 factor solution reported by Koys and DeCotiis (1991), the results, nevertheless, are encouraging.

The largest factor consisted of 13 items and accounted for 22.2% of the common variance. The factor represents an amalgam of *Trust, Support* and *Fairness* dimensions from the Koys and DeCotiis (1991) study. The common thread of many of the items refers to aspects of interpersonal communication that characterises the relationship between superior and subordinate. Accordingly, this factor may best be termed *Interpersonal Communication*. The next biggest factor, accounting for almost 16% of the variance, is a combination of Koys and DeCotiis's (1991) *Recognition* and *Innovation* factors. The intersection of these two factors, especially in a university setting where there is an emphasis on seeking recognition for innovative behaviours suggests this factor could be interpreted as *Research* Support. Further evidence comes from the loading of two *support -related* items on this factor (*my superior is interested in me getting ahead in the organisation* and *my superior backs me up and lets me learn from my mistakes*).

The remaining three factors (*Autonomy, Pressure* and *Cohesion*) replicated those from the Koys and DeCotiis (1991) study, accounting for 8%, 7% and 9% of the variance respectively. Measures of co-effecient alpha were calculated using Slavin's (1992) method of computation. Although the internal consistency measures returned somewhat lower reliabilities for *Autonomy, Cohesion and Pressure* Slavin is of the opinion this could be due to the lower number of items in those scales (5) than in *Research* (12) or *Interpersonal Communication* (13).

The final dimensions and the number of items comprising each scale had associated internal consistency reliabilities > 0.40. This is acceptable according to Nunnally (1978) and, in part, confirms the piiot work done by Koys and DeCotiis (1991).

Organisational Climate by Factor

Organisational climate scores were calculated by summing scores of items of the five respective factors. Higher mean scores represent more positive perceptions of organisational climate. To the extent there was intersubjective agreement about organisational climate it was thought to represent learned and, therefore, common frames of reference for organisational members. Table 2 contains the mean scores for each factor in rank order across the academic staff of the university. It is clear that *Autonomy* is an important issue for all academics. So too is the quality of the interpersonal communication relationships with one's superior.

Table 2. Perceptions of Overall Climate by Factor

Factor	Mean Rating
Autonomy	4.38
Interpersonal Communication	3.55
Research	3.22
Cohesion	3.17
Pressure	3.10

Not only were items relating to *Autonomy* consistently rated highest, the variability around the mean score of 4.38 was lowest of all the factors, suggesting organisation wide agreement about the significance of autonomy to the life of an academic.

There was also broad positive agreement for scale items associated with the *Interpersonal Communication* factor. An exception related to feedback where only 34% of the respondents agreed that *My superior knows what my strengths are and lets me know it.* The final three factors, while still finding general support and, therefore, indicative of a healthy organisational climate, contained a good deal of variation. It seems reasonable to conclude that such variance is strongly suggestive of the presence of subclimates.

Subclimates

Since organisational members are heavily influenced by social interaction (Schneider and Reichers, 1983) and there is some indication that interaction is an appropriate level of aggregation (Rentsch, 1990) the various faculties were rank ordered in terms of their mean scores across all items in the climate survey (see Table 3).

Table 3. Perceptions of Overall Climate by Faculty

Faculty	Mean Rating
Faculty A	3.65 *
Faculty B	3.41
Faculty C	3.36
Faculty D	3.34
Faculty E	3.11 *

The difference in the mean rating scores between Faculty A which had the next most favourable perceptions of the organisational climate and Faculty E, the least favourable, was statistically significant ($t = 3.154$, $df = 44$, $p = 0.003$). Hence, there is empirical evidence for the existence of subclimates. These two faculties formed the basis of further inter faculty comparisons with respect to the various factors uncovered, as well as aspects of organisational culture to be discussed below.

Table 4 depicts the contrasts between Faculty A and Faculty E across the different factors. A series of independent t-tests revealed that the mean scores of three of the factors (*Research, Pressure and Cohesion*) differed significantly as the values of p indicate.

Table 4. Perceptions of Various Factors by Faculty

Faculty	Factors				
	Research	Autonomy	Pressure	Cohesion	Communication
Faculty A	3.53	4.64	3.24	3.48	3.66
Faculty E	2.55	4.45	2.60	2.74	3.36
All Faculties	3.25	4.38	2.90	3.17	3.55
p	0.001	0.270	0.054	0.001	0.220

In examining the responses in Faculty A and Faculty E, some interesting contrasts emerged. For example, there were significant differences related to *Cohesion.* These differences were repeated at an item level, with Faculty A showing much tighter variance than Faculty E on 33 of 40 items suggesting that at a subunit level there is greater consensus in Faculty A. There is some justification in looking at estimates of variance (i.e. standard deviations) to detect whether there is greater homogeneity at a sub-unit (Faculty) level than at an organisation wide level (Jones and James, 1979). Overall the data strongly support the notion of sub-unit levels of organisational climate.

Culture Overview and Themes

Following the transcription of the audio tapes the data were condensed by selecting key phrases used by interviewees in expressing beliefs, values and attitudes associated with each of the focus issues. Second, the extracted elements were then compared against transcripts derived from each of the other interviewees in order to arrive at a higher level of abstraction. Attention was paid to linguistic as well as non verbal cues (e.g. posture, tone of voice). When disparities became obvious, more information was sought in order to derive the most accurate picture. Third, the transcripts were carefully combed through for thematic consistency across individuals. Points of commonality in terms of values, beliefs and attitudes were regarded as reflecting shared assumptions that guide organisational behaviour and influence how staff perceive, feel and think about things (Argyris and

Schon, 1978). Finally, a number of discussions regarding uncovered themes were held with various colleagues who were employed during the latter stages of the research project to reduce the possibility that the cultural analysis was overly subjective. Only a few universally common cultural themes emerged all referring to organisational processes. These included the specific ways in which tasks are accomplished, the relationships amongst people within the university, and finally the way decisions related to change are accomplished. More often it was a case of themes in opposition.

From the analysis it is clear the University is a leader focused culture (Kabanaoff, 1993). The CEO arrived ten years ago with an entrepreneurial outlook accompanied by strong ideas about *what* needed to be done and *how* it needed to be done. Although his assumptions on how to proceed were tested quite early, history has shown him to largely be correct as most interviewees conceded that the University has flourished under his leadership.

Over time the CEO assembled around him, in the DVC's unit, a cadre of talented people who were delegated some of the elite's authority. It is important to understand the emphasis was on loyalty rather than equality. People at this level made the following observations:

- *He has vision and a very clear view of how an institution like this can work in terms of relating its resources to its structures;*
- *He has antennae to read things years before they happen*
- *He de amalgamated this university all on his own. He did it all by himself I don't know how he did it but he just is incredible. He formed some external committees and then just did it all by himself. No one else had the courage to do it. Same with the Telecom Project, he did it all on his own. He just moves at such a fast pace, none of us can keep up with him.*
- *He is a very intuitive leader ... able to suss out what's happening* {but}*he doesn't pay any attention to dotting the 'i's or crossing the 't's, that's for me to do;*
- {So}*He needs talking chiefs around him*

The CEO is conscious of his culture building potential and hence pays close attention to most things in the organisation confirming Duignan's (1987) suspicion that leadership forces have a great influence on what goes on in educational institutions. To illustrate with an example of a culturally shaped organisational goal, the CEO recently established a university wide Graduate Research College specifically designed to:

- develop new graduate programs at the masters and doctoral level
- diversify and strengthen the graduate student body
- to promote faculty research and scholarship.

The CEO is obviously a man of charisma with the ability to articulate values and assumptions in a vivid and clear manner. Balanced against this is a tendency to maintain a tight centralised control. Frequently he is seen to intervene with things that go on around the campus. Established policy is often pushed to one side. Long time organisational members, having grown up in the organisation, do not experience the same anxiety that newcomers do when confronted with what are obvious inconsistencies. The underlying theme is that the CEO as a leader is a creative genius who, because of particular idiosyncrasies, has developed what some people regard as dysfunctional leadership behaviour.

An Interactive Climate-Culture Model Applied to the University

In order to test the goodness of fit of expressed cultural values, attitudes and beliefs with dimensions of climate, a direct comparison was made between Faculty A and Faculty E in terms of their respective subclimates and subcultures

Subcultures and Subclimates

The most interesting parrallels emerged when comparing subcultures and subclimates of Faculty A with Faculty E. The Dean of Faculty A perceived the leadership culture in a generally positive way (*This place is characterised by VERY strong individual responsibility in its leadership. I see that as a very, very great strength. His vision is to let people get on with their jobs, helping them with resources if they do a good job*). Consequently, the Dean spends a great deal of time lobbying for resources for his faculty. One outcome is increased opportunities for innovation (eg research).

This is borne out by the observation several Faculty A staff enjoy an internationally recognised reputation in their field (*doing the things they do well and there is a long list of them. We have several people in the Faculty who are, in fact, in the top 2 or 3 people in the world at what they do*). The important point to make out of all this is not only is the subculture of Faculty A positively aligned with the leadership culture, its subclimate is the most positive in the University and this nicely demonstrates the relationship between these two concepts as well as the importance of the mediating influence of the Dean as a carrier of culture.

On the other hand, the Dean of Faculty E generally has a negative view of the leadership culture (*A lot of decisions are made ON THE HOOF... a lot of back door stuff and THAT...THAT bothers me. If I am the Dean of my faculty why am I not as the dean included in these decisions? So I have a real problem with THAT adhocery*). Furthermore, the Dean has come to regard the Faculty as part of the outgroup when it comes to resource allocation (*I think we are doing good things here and if we could just get the resources we could do so much more*). Consequently, there is little cohesion in Faculty E, as the climate survey also showed. No doubt this was due to the existence of a counterculture at the subunit level.

Of greatest importance is the finding that the subclimate of Faculty E is significantly less favorable than Faculty A. External conflict levels are high over the fight to establish programs (*I am determined to get a Masters Degree up in this Faculty come hell or high water. Yet in 3 years I have been unable to do it*) Inevitably pressures build up (*I work most nights and most weekends but I am getting tired of it*). Morale is low due to in-fighting (*There's lots of staff bitching some threatening to sue each other and getting students to tell them what others said*). In summary, the subculture of Faculty E and therefore, the subclimate is a by product of the mediating influences of the Dean's strongly negative perception of the leadership culture. The data demonstrate that at the lowest level of the organisation, aggregated subclimate measures can act as a predictor variable for estimating the congruence of the subunit's culture with the umbrella or leadership culture. Figure 2 diagrams the interactive aspects of this process.

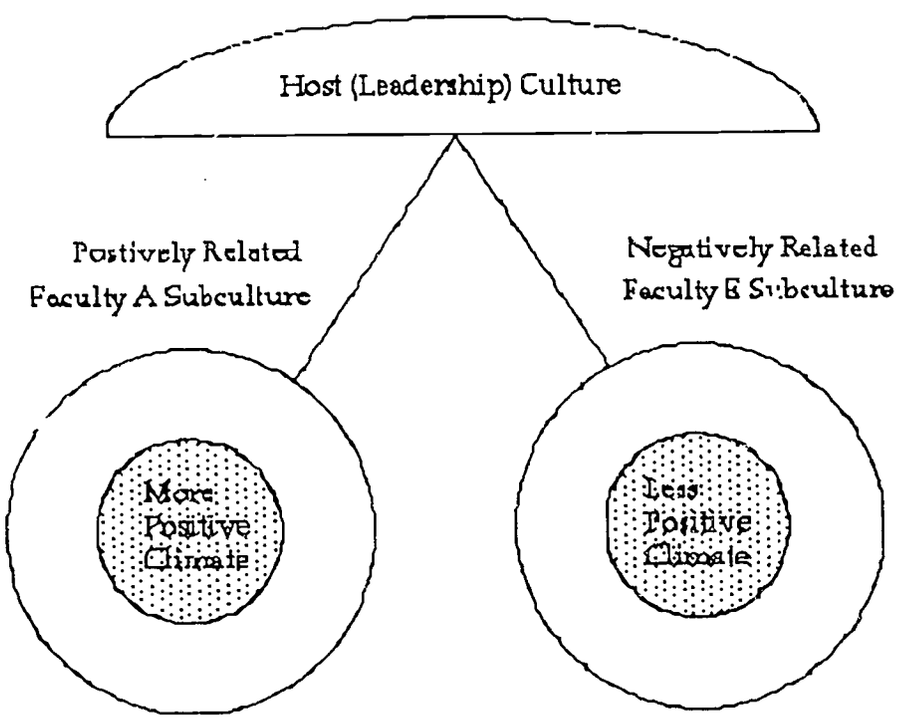

Figure 2. The relationship of subcultures and subclimates as a function of the mediating influences of the Dean's perceptions of the host (leadership) culture

CONCLUSION

Harrison and Carroll (1991) have recorded the burgeoning interest in organisational culture in the last decade to the point where organisational theorists have come to regard strong culture as an alternative to the formal structure of an organisation. This project used a interpretivist approach based on Schein's (1992) three level model to explore hidden elements of organisational culture in a new university. Results reinforced the belief that culture provides the context for the creation of meaning for organisational members. At a subunit level where shared values, attitudes and beliefs accorded with those of the host culture then the subunit's climate was likely to be positive. On the other hand, subunits weakly aligned with the host culture tended to evidence less favourable perceptions of climate. Hence, organisational members approach and view their workplace in a meaning making way (Putnam and Pacanowsky, 1983). In this regard culture informs climate in assisting the individual to decide what is important in their experience.

Results of the present study tend to support Poole (1985: 101) who contends climate is a artefact of culture, by maintaining climate " is a **cultural** product [emphasis mine] that is neither objective nor subjective but intersubjective". Elsewhere the same author regards climate to be "an empiricist substitute for the richer term "culture" [and concludes] ... climate seems to be a feature of rather than a substitute for culture" (Poole, 1985:84).

The writer has taken the view, consistent with a subjectivist approach that neither of the two concepts can exist apart from the perceptions of the individual. That is, the individual is the carrier of culture within an organisation and it is the agreed upon perceptions of the behavioural manifestations of culture that provide the raw material for the organisation's climate. While culture evolves slowly over time, it remains closely tied with organisational climate. The latter is deeply rooted in individual perceptions and includes dimensions of autonomy, trust, cohesion, pressure, support and recognition (Koys and De Cotiis, 1991). These perceptions initially serve as the individual's cognitive map of how the organisation functions and later become the basis for interactions with others. Over time these perceptions become more like shared assumptions which in turn underpin the emergence of organisational culture with its distinctive sociological focus (Moran and Volkwein, 1992). The extent to which these shared assumptions or learned behaviours enable the organisation to cope with its "problems of external adaptation [as well as] ... internal integration' (Schein, 1985: 9) these assumptions tend to become almost taken for granted and drop out of awareness. Hence, the bridge between the two variables becomes shorter since it is not such a great distance between shared assumptions (culture) and shared perceptions (climate).

At the subunit level, different areas of the University employed different kinds of cultural management. Evidently the CEO, as leader of a young university, externalised his own assumptions and attempted to embed them in the structures and working practices of the organisation in the manner Schein (1992) suggests. But this process of culture creation, along with the mechanisms for embedding, sometimes create problems since "leaders not only make explicit their value system but tend to communicate their own inner conflicts and inconsistencies in their own personal makeup" (Schein, 1992: 376). In this case, the CEO believes *conflict is good (laugh) ... because it creates an emotion umm it creates an issue and it gives them (staff) an independence that they not have always had... I think it creates a more dynamic organisation but that is probably more difficult to handle in terms of interpersonal relationships.* He was firmly convinced that, managed properly, the presence of conflict would assist the organisation in its search for new meaning (Stacey, 1992). At the subunit level, however, most staff were desirous of a more democratic decision making process. In the final analysis the data strongly accord with Kimberly's (1979) opinion that "the background characteristics of organisational founders have long term effects on the structure, balance of power and values of the organisation" (cited in Euske and Roberts,1987: 56).

ENDNOTES

1. Beliefs and values can be so taken for granted that people, especially those lower down in the organisation, may be unaware of them. For example, Sackmann (1992) recently interviewed employees in a number of large Californian corporations and while there was no difficulty in teasing out values and beliefs closely intertwined with mission statements and policies at senior management level, when she turned her attention to those at the lower levels, including the shop floor, no amount of probing could uncover the culture of the organisation.

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APPENDICES

APPENDIX A

Appendix A. Beliefs About Work Place Practices

I am interested in your perceptions of your work place setting. Below is listed a series of options or beliefs about work place practices. Could you indicate for each statement whether you agree or disagree with the statement as it applies to you in your current work place. The questionnaire is for research purposes; your name will not ever be attached to your comments.

Key

A	Strongly agree
B	Agree
C	Undecided/neutral
D	Disagree
E	Strongly disagree

Here is an example.

5. I schedule my own work activities. A (B) C D E

If you agree circle 'B' above.

	Strongly Agree				Strongly Disagree
1. I feel like I have a lot in common with the university people I know.	A	B	C	D	E
2. My superior encourages me to improve on his/her methods	A	B	C	D	E
3. My superior "talks up" new ways of doing things.	A	B	C	D	E
4. My superior knows what my strengths are and lets me know it.	A	B	C	D	E
5. I schedule my own work activities.	A	B	C	D	E
6. I make most of the decisions that affect the way my work is performed.	A	B	C	D	E
7. I organise my work as I see best.	A	B	C	D	E
8. My superior is not likely to give me bad advice.	A	B	C	D	E
9. At home, I sometimes dread hearing the telephone ring because it might be someone calling about a work- related problem.	A	B	C	D	E
10. My superior is not likely to give me a hard time.	A	B	C	D	E
11. My superior is behind me 100%.	A	B	C	D	E
12. My superior likes me to try new ways of doing my work.	A	B	C	D	E
13. I can count on a fair deal from my superior.	A	B	C	D	E

	Strongly Agree				Strongly Disagree
14. At work too many colleagues at my level get "burned out" by the demands of their job.	A	B	C	D	E
15. At university people tend to get along with each other.	A	B	C	D	E
16. My superior uses me as an example of what to do.	A	B	C	D	E
17. My superior backs me up and lets me learn from my mistakes.	A	B	C	D	E
18. There is a lot of "team spirit" among my colleagues.	A	B	C	D	E
19. My organisation is a relaxed place to work.	A	B	C	D	E
20. My superior has a lot of personal integrity.	A	B	C	D	E
21. My superior encourages me to find new ways around old problems.	A	B	C	D	E
22. If my superior reprimands someone, the person probably deserved it.	A	B	C	D	E
23. The only time I hear about my performance is when I mess things up.	A	B	C	D	E
24. My superior is easy to talk to about work- related problems.	A	B	C	D	E
25. I feel like I never have a day off.	A	B	C	D	E
26. My superior follows through on commitments made to me.	A	B	C	D	E
27. At university people take a personal interest in one another.	A	B	C	D	E
28. I set the performance standards for my work.	A	B	C	D	E
29. My superior is interested in me getting ahead in the organisation.	A	B	C	D	E
30. My superior is quick to recognise good performance.	A	B	C	D	E
31. The objectives my superior sets for my work are reasonable.	A	B	C	D	E
32. My superior encourages me to develop my ideas.	A	B	C	D	E
33. I can count on my superior to help me when I need it.	A	B	C	D	E
34. I determine my own work procedure.	A	B	C	D	E
35. My superior is the kind of person I can level with.	A	B	C	D	E
36. At my work people pitch in to help each other out.	A	B	C	D	E
37. I have too much work to do and too little time to do it.	A	B	C	D	E
38. I can count on a pat on the back when I perform well.	A	B	C	D	E
39. My superior does not play favourites.	A	B	C	D	E
40. I can count on my superior to keep things I tell him/her confidential.	A	B	C	D	E

Thank you for your participation.

APPENDIX B

Appendix B. Factor Analysis

Item	Summary	Factors				
		Research	Autonomy	Pressure	Cohesion	Communication
4.	Superior lets me know	0.816				
30.	Superior recognises good job	0.679				0.530
3.	Superior talks up new ways	0.670				
2.	Encourages to improve on his methods	0.663				
32.	Superior encourages ideas	0.637				0.471
16.	Uses me as an example	0.613				
29.	Superior interested in me getting ahead		0.611			0.458
21.	Encourage new way around problems	0.607				0.464
17.	Superior backs me up	0.583				
12.	Likes me to try new ways	0.547				
38.	Can count on pat on the back	0.535				
34.	Determine own work procedure		0.789			
7.	Organise my work as I see best		0.784			
5.	Schedule my own work activities		0.737			
6.	Make most decisions that affect my work			0.734		
25.	I feel like I never have a day off			0.751		
14.	Too many people get 'burned out'			0.714		
37.	Too much work and too little time			0.661		
19.	Relaxed place to work (reversed)			0.566		
36.	People pitch in to help each other				0.780	
27.	People take a personal interest				0.745	
18.	A lot of 'team sprit' amongst colleagues					0.656
15.	People get along with each other				0.553	
1.	Have a lot in common with people				0.530	
13.	Can count on a fair deal					0.761
40.	Count on superior to keep things private					0.747
20.	Superior has a lot of personal integrity					0.742
35.	I can level with my superior					0.729
39.	My superior does not play favourites					0.712
11.	My superior is behind me 100%					0.689
22.	If superior reprimands, probably OK					0.672
24.	Superior easy to talk to about work					0.667
33.	Can count on superior's support	0.455				0.655
26.	Superior keeps commitments					0.648
8.	Superior not likely to give bad advice					0.623
10.	Superior not likely to give me a hard time					0.622
31.	Superior sets reasonable objectives					0.413
28.	I set the performance standards		0.478			
23.	I hear about my mistakes (reversed)	0.477				
9.	I dread calls at home			0.479		
Percent of variance explained by factor		15.9	8.2	7.1	9.1	22.2

Loadings > .45 are shown